DCCUMENT RESUME

ED 034 06C 08 VT 009 748

AUTHOR Brandcn, George I., Ed.
TITLE Research Visibility: Comprehensive Planning.
INSTITUTICN American Vocational Associaticn, Washingtcn, D.C.
Spcns Agency Cffice of Education (DHEW), Washingtcn, D.C. Bureau cf Research.
Bureau Nc ER-7-0633
Pub Date Ncv 69
Grant CEG-2-7-070633-3021
Note 16p.
Jcurnal Cit Amer Vocat J; v44 n8 p69-84 Nov 1969

EDRS Price EDRS Price MF-$0.25 HC-$0.90
Descriptors *Biblicgraphies, *Educaticnal Research, Federal State Relationship, *Prcgram Planning, *Research Reviews (Publications), State Prcgrams, Systems Apprcach, *Vccaticnal Educaticn

Abstract

Twelve research reviews in this issue pertain tc ccmprehensive planning in vocational and technical educaticn organized under these topics: (1) "The Systems Approach" treats a Pennsylvania approach to state-lccal Prcgram planning and an Cregcn Planning Prcgramming Budgeting Systems institute, (2) "Prcgram Planning" includes a discussicn of the future of vccaticnal-technical educaticn, program develcpment in technical educaticn, ccmmunity college planning, manpower surveys, and distributive education, (3) "State Wide Planning" discusses area vccaticnal-technical schools in Minnescta and a Califcrnia project to prepare educational planners, and (4) "Federal-State Planning" includes vccaticnal education and cccupations, planning and evaluation, and state plan develcpment. "Plain Talk," a ccntinuing colurn by the editcr, warns cf prcblems inherent in a systems apprcach which dces not recognize individuals and individual differences and discusses three references fcr prcfessional reading. A bibliography lists 28 studies repcrted in this issue and prcvides crdering information. (DM)

ED034060

RESEARCH VISIBILITY

SYNTHESIS / APPLICATION / DISSEMINATION

NOVEMBER 1969

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

COMPREHENSIVE PLANNING

page

GUEST EDITORIAL 70
Comprehensive Planning: a Capsule Treatment—Otto P. Legg

TOPIC I: THE SYSTEMS APPROACH 72
Pennsylvania Approach to State-Local Program Planning
Oregon PPBS Institute

TOPIC II: PROGRAM PLANNING 74
Vocational-Technical Education in the 1970s
Program Development in Technical Education
Community College for Rural and Urban Youth
Manpower Surveys for Vo-Tec Educational Planning
Balanced Programs in Distributive Education

TOPIC III: STATEWIDE PLANNING 79
Area Vocational Technical Schools in Minnesota
California Project to Prepare Educational Planners

TOPIC IV: FEDERAL-STATE PLANNING 80
Vocational Education and Occupations
Program Planning and Evaluation
State Plan Development Under 1968 Amendments

PLAIN TALK 82

BIBLIOGRAPHY 83

VT009748

GUEST EDITORIAL

COMPREHENSIVE PLANNING
a capsule treatment

OTTO P. LEGG

Research Visibility sidesteps its traditional word of introduction to the topic of the month to acquiesce to a guest editor of the month. The editorial privilege is ably assumed despite limitations of space to highlight the critical importance of planning these days as implementation of the Vocational Education Amendments becomes operational.

Few people on the national scene have the experiences and insights in comprehensive planning as Otto P. Legg, senior program officer, Program Planning, Division of Vocational and Technical Education, U. S. Office of Education, Washington, D.C. Of the few people, fewer still would subject their ideas to the violence imposed by RV's space requirements. Dr. Legg, convinced of the critical importance of planning in vocational education, presents salient features of the process for our entrée.

THE QUESTION may be asked, why is planning necessary and what are its essential elements? The answer is, that resources available for the provision of all public services are limited. Education is in competition with all other public services. Therefore, comprehensive planning is necessary to provide accurate information for decisionmaking and for management of funds made available by local, State and Federal governments for education.

While our country provides a volume of education never before attained, certain imbalances must still be adjusted—the incidence of dropout, unemployment, delinquency, and the basic inequality of educational opportunity. These imbalances force a critical examination of traditional methods of providing educational services and of inhibiting factors which affect the education and employment of people.

The expectation is growing that modern education must be fully planned and offered in a precisely controlled manner.

The educational system must be attuned to each individual as he grows and matures in our American society.

The state of the planning art is quite low and must be improved both in regard to functional planning and coordinative planning at all levels.

Planning Objectives. Comprehensive planning for vocational education must be directed toward main types of activities:

1. Programs providing initial educational development; that is, those efforts necessary to adjust each individual to a useful occupational and social role in American society.
2. Programs of vocational education provided from time to time which are necessary to help each individual remain productive and adjusted toward the American social system.
3. Continuing education directed to all individuals who may benefit from it vocationally as they mature in the American society.

Many educational institutions do not see their roles as comprehensive, nor do they consider their programs in the light of overall local and State objectives, nor make meaningful comparisons between alternative programs or alternative ways of carrying out programs. The tendency has been to select and justify programs on the basis of intuition or tradition, to plan and budget in terms of object and activity, and to evaluate in terms of effort expended.

Planning is often isolated or compartmentalized. The recent interest in "management by objective," or "program packaging," and further specified in the Vocational Education Amendments of 1968, has encouraged states and local communities to conduct broad planning activities to reduce educational and related problems. Planning which is comprehensive must involve all agencies

and organizations which contribute to the administration of occupational education. Such planning takes into consideration, rationally and systematically, the capabilities and contributions of agencies, organizations and systems (both educational and non-educational) which are essential to the effective delivery of educational service.

Framework for Vo-Ed. Vocational educators are involved in planning programs with a mission part of which is stated in Federal and State legislation and regulations. The mission specifies the organization's reason for existence, describes the general services and functions to be performed, and defines the limits of its jurisdiction and authority. The mission remains more or less fixed unless changed by law or other official action.

The mission of the Federal Government relative to vocational education is to help provide throughout the Nation readily accessible programs of vocational and technical education for persons of all ages in all communities at all levels, which will enable these persons to enter and advance in the Nation's labor force.

Goals are established by the vocational leaders in each State. A goal is a long-range, specific statement of intended accomplishment toward which programs are directed. It may be as ambitious or idealistic as good judgment dictates, but it must be consistent with the mission. A time is not fixed for its achievement. A goal should be stated in terms of completely overcoming an educational problem or reducing it to the extent which the state of the art permits. A goal is not stated in terms of the current availability of resources, although it must depend upon the current state of knowledge. Broad goals will be set by local, State and Federal agencies responsible for overall comprehensive planning.

Operating agencies and organizations with comprehensive plans must define specific operational education objectives annually which are appropriate to their respective mission and goals; these objectives must be measurable and consistent with the intended goal.

The mission, goal and objectives must be comprehensive in terms of geographic and population coverage. In addition, the plans should represent activities for all agencies involved in mitigating the various occupational education deficiencies. Plans which state educational problems, their causes and related factors should also contain educational objectives quantified in terms of expected outcomes in a specified time.

Many Agencies Involved. These projected activities or plans of action are the heart of comprehensive educational planning. They constitute the blueprint for action, the commitment to do something calculated to help attain the desired educational status. Plans of action cannot be limited to classical educational activity but must encompass activities of other agencies which have responsibilities and authority for certain educational program areas. Some examples are socioeconomic conditions, health, housing, working conditions, and work opportunities. All are factors which may adversely affect educational status, but none are within the direct purview of regular educational agencies.

Thus, comprehensive vocational planning must consider plans of action to be carried out by agencies which are not educational but whose functions affect the educational environment. Systematic analysis is necessary to identify problems, measure results and provide alternatives.

Problem identification is of critical importance in order that individuals providing analysis may develop social and occupational sensitivity; it is on this critical point that educators might lose control to technicians acquainted with program budgeting and systems methods. Care must be exercised in communicating meaningful and correct data which describe realistic alternative procedures as a result of analysis.

Tool for Decision-Makers. Maintaining and expanding a program of public vocational education depends greatly upon the proper utilization of reliable data and the sophisticated analysis of these data by decision-makers.

Considerable evidence shows that too narrow a focus on the immediate present and too much reliance on the past structure of administration and operation restrict the utilization of data and limit imaginative assumptions too early in the formulation of many plans. We do not know what structural changes will occur in administration or what resources will be devoted by the several levels of government to vocational education. Therefore, the focus should be on what needs to be done for people who will fill occupational roles. We must focus on what is right and not worry so much about who is right.

Modern management demands that alternatives be prepared and accompanied by both real and hypothetical results, both desirable and undesirable. Otherwise, a course of action may be relatively meaningless. Action taken on this basis creates an image of the reliability of the organization or of the individuals taking the action. Whether recognized or not, action is taken on the continuum of uncertainty and, most appropriately, from the position of certainty. The role of planning is to strengthen the hand of decision-makers.

Program Evaluation. The planning process is obviously not complete without a specific plan for evaluation. Program evaluation is a process of determining the extent to which specific objectives and predetermined levels of operation were attained. Management uses program evaluation to insure that intentions are actually realized and that desired effects are achieved. The basic responsibility of evaluation is the appraisal of services in terms of their impact on the problems of the people that vocational education is intended to serve.

The evaluation process is essential. Without it, no plan of action can be valid and reasonably expected to be carried out successfully. Evaluation is thus used in all phases of program planning and program operation. It represents a feedback mechanism that consistently provides information necessary for the appraisal and correction at every phase of the operational process. It reduces the gap between foresight and hindsight.

One thing is certain, change will come whether planned or not. But the piecemeal approach of the past will no longer provide the kinds of solutions schools need today. There must be a clear idea of the ultimate outcome of all programs in vocational education, and the sequence of events must be mapped with the utmost care and precision.

Pennsylvania Approach to State-Local Program Planning

Vocational-Technical and Continuing Education in Pennsylvania: A Systems Approach to State-Local Program Planning. Walter M. Arnold. Pennsylvania Department of Public Instruction. 1969.

This study was conducted for the purpose of analyzing the vocational, technical and continuing education programs in Pennsylvania since the passage of the Vocational Education Act of 1963 in order to initiate a systematic planning effort in manpower development for the State. Thirteen goals, approved by the Pennsylvania State Board of Education, provided the guidelines for the study, which attempted to develop an overview of the achievements and deficiencies of the programs during the past five years.

Section I of this report presents an analysis of enrollments and expenditures in vocational-technical and continuing education from 1964 through 1968. An appraisal is also made of the current direction which programs are taking in the light of projected manpower needs in Pennsylvania. It is noted that technical education and health occupations education have the lowest enrollments despite the acute shortages of manpower in these fields. Although expenditures for vocational education in Pennsylvania have increased, they are still small in comparison to total expenditures for secondary education in the State. This is particularly true when the unmet trained manpower needs of the State are considered.

Section II analyzes and describes economic and projected trends of the Pennsylvania economy for the purpose of studying these trends and planning programs of vocational, technical and adult education. Nine principal occupational training agencies and programs are identified and described in order to study the supply of occupationally trained persons from these programs. Suggestions are given for improving the efficiency of these agencies and programs in supplying occupational education program graduates.

A systems approach to program planning is explained and described in Section III. The purpose of the system is to provide a method of making decisions regarding selection of a program from various alternatives. The need for systematic planning has been demonstrated by the haphazard way in which such choices have been made in the past.

In developing its systems approach, the study took into account the following factors: (a) existing vocational education programs; (b) supply and demand for trained persons; (c) existing socioeconomic conditions and trends, and (d) available funds and resources. Recommendations for State organization and administration needed for implementation of such a system are made, with the State Board of Education suggested as the coordinating agency.

Section IV notes that existing Pennsylvania financial aid policies and procedures "do not permit management of funds in the best interests of meeting critical needs and demands and . . . are not consistent with the requirements of the Vocational Education Amendments of 1968." Considerations which should be taken into account in formulating future policies and procedures are presented. Approaches which tie together planning steps and financial aid policies and procedures are also suggested.

Ancillary services and activities during the past five years, particularly in the areas of teacher education and certification and vocational guidance services, are reviewed in Section V. New certification requirements which will permit certification of a person who does not hold a degree, providing certain other requirements are met, are described. It is hoped that these new regulations will assist in eliminating the shortage of certified teachers in vocational education, especially in fields such as ornamental horticulture and institutional food service where experience is often a better teacher than formal schooling.

An account of five special studies (large cities, special socioeconomic needs, a follow-up system of graduates, an employer survey, and an administrator survey) is presented in Section VI.

Section VII synthesizes and summarizes the conclusions and recommendations of the study. Program expansion which is needed to bring the annual supply of trained manpower more nearly in line with future demands is outlined. Deficiencies in the Pennsylvania program which are noted include the lack of post-secondary programs and part-time adult vocational-technical programs. Greater attention is needed in the area of helping persons with special needs, such as the socioeconomically handicapped, particularly in the Appalachian counties.

Oregon PPBS Institute

The Oregon Planning-Programming-Budgeting-Systems Institute. Harold V. McAbee. Teaching Research Division, Oregon State System of Higher Education. Monmouth, Ore. Dec. 31, 1968.

The U.S. Office of Education, Bureau of Research, financed this Institute, which was held in August 1968. The object was to bring together selected State and local vocational education administrators to discuss the need for Planning Programming Budgeting Systems (PPBS). The Institute provided an opportunity for establishing broad professional contacts and promoting a partnership with respect to Federal, State and local relationships. It helped to acquaint participants with available PPBS development resources, and it served as an arena for collection of PPBS materials.

The program was geared to the beginner in the PPBS field. The role of PPBS in solving vocational education's administrative problems was the keynote of opening sessions, while final sessions were directed toward planning which would be necessary when participants returned to their local areas.

As described in the introduction to the Institute report, "PPB is a systems approach to educational budgeting, management and control." Its primary contribution to educational organizations is that of committing

group planning toward goals. Planning is done several years in advance, thereby enabling costs to be planned on a correspondingly long-range basis.

The first major address was made by Keith Goldhammer, dean, College of Education, Oregon State University. He emphasized the need to use available knowledge and data for improving professional administrative practices, and he defined the administrator's role as one of being "the goal setter, the data collector, interpreter and relater to decision-making." He pointed out five major functions of research with respect to decisionmaking: (a) definition and collection of adequate data, (b) ordering the data and estimating its validity, (c) starting a storage and retrieval system; (d) defining critical utilization of data, and (e) applying theory and data to practice. Dr. Goldhammer concluded that PPBS could help in decisionmaking through this process.

Cecil Stanley, director, Division of Vocational-Technical Education, Nebraska, gave two presentations which helped to set the need for application of PPBS in the problems of state level administration and state-federal financial relations. Mr. Stanley enumerated many problems in these areas among which the following are typical: (a) how can multilevel programs be efficiently organized and articulated?, and (b) what is cooperative education and how can it best be organized?

Technical Aspects of PPBS

The technical aspects of PPBS were presented by Lavor Neuenswander, director, Financial Management and PPBS Training Institute, Bureau of Training, U.S. Civil Service Commission. According to Mr. Neuenswander, "PPBS does not make decisions for the decisionmaker, but orders the data so that more effective allocation of scarce resources (decisions) can be made."

Detailed instruction in understanding and implementation of PPBS was given through various presentations. The first, by Gerald Gage, research professor, Teaching Research Division, Oregon State System of Higher Education, established guidelines for specifying valid objectives. "Developing the Program Memoranda, Terms and Definitions" was then given light by Harold McAbee, the Institute director. The need for definitive terminology was stressed, as was that for a "program memoranda," a broad-based document which states the purposes, objectives and description of programs and budgetary and analytical data.

A presentation by Otto Legg, senior program officer, Program Planning Division, Bureau of Vocational and Technical Education, U.S. Office of Education, delineated the status of PPBS with respect to the viewpoint of U.S.O.E. Pointing out that, with increased competition for government funds, vocational educators must develop more sophisticated means of convincing decisionmakers of the validity of educational requests, Dr. Legg suggested that "broad planning should also include non-education agencies and resources."

Basic Economic Principles

Basic economic and statistical principles in PPBS were explained by William Freithaler, Department of Economics, University of Virginia, along with presentations on cost effectiveness and cost benefit analysis. Economic concepts, such as the Phillips Curve Concept, the law of supply and demand, the law of diminishing returns, marginal analysis, indifference curves, regression analysis, theory of discounting, dealing with uncertainties, and macro vs. micro economic theory, were illustrated as they apply to vocational education.

Another presentation on cost analysis, "Planning Cost Analysis of a Training Program," was made by Dr. McAbee. Values which he noted must be computed in such analysis are: (a) value of increased income; (b) value of increased productivity; (c) spillover benefits such as decreased welfare and crime rates, and increased health status, and (d) value of residual educability. He also presented information related to "Budget Cycles, Formats, and Crosswalks."

OEO Case Study Discussed

A case study prepared for the Office of Economic Opportunity by Glen G. Cain was discussed. The study, "Benefit-Cost Estimates for Job Corps and Implications for State Level Vocational Education," illustrated several difficulties which can be encountered in first attempts at cost-benefit analysis: lack of valid data, lack of precedent in use of the cost-benefit approach, problems in use of the real resource approach, and credibility and acceptance.

In his presentation entitled "Levels and Types of Analyses," James V. De Long, an analyst for the Program Evaluation Staff of the Bureau of the Budget, Washington, D.C., outlined seven levels or types of analyses: (a) cost benefit analysis; (b) cost effectiveness analysis; (c) direct cost per unit of output; (d) cardinal weighting of advantages and disadvantages of the program; (e) ordinal weighting or ranking of alternatives; (f) simple qualitative rationale for the recommendations, and (g) simple statement as to why or how the decisions were reached. He also spoke on the "Role of the Budget Examiner and Analyzing Needs."

Budget-Making Realities

Political aspects of the budgetary process were discussed late in the Institute. Angus Rothwell, executive director, Educational Coordinating Council, State of Wisconsin, spoke on "Political Realities of the Budget-Making Process." He illustrated his talk with a thorough outline of the educational decisionmaking process in Wisconsin and its connection with politics.

Oregon State Senator Lynn Newbry, speaking on the topic "A Legislator Looks at Educational Requests," revealed his personal ideas about priorities for allocation of funds, and he noted that "educators could help if they would establish some inhouse priorities."

Broadcasters Offer Grants

Grants for research into social, cultural, political and economic aspects of American commercial broadcasting are being offered by the National Association of Broadcasters. Application forms, due by Dec. 1, 1969, may be obtained from John Dimling, Jr., vice president for research, National Association of Broadcasters, 1771 N St., N.W., Washington, D.C. 20036.

Oregon Budget Director Cleigh Penwell offered his views in a talk entitled "The Governor's Office Looks at PPBS and Education Requests."

Conclusion of the Institute included a lesson in PERTing implementation of PPBS programs for use when Institute participants returned home.

Dr. McAbee summarized the conference with a presentation on "Skepticism and Limitations of PPBS." Answers were offered for anticipated points of skepticism, such as claims of a lack of personnel to do the new job and the view that "It's the same old thing in a new package."

An evaluation of the Institute was made by Frank Nelson, assistant research professor, Evaluation Unit, Teaching Research Division, Oregon State System of Higher Education. One of his observations was that "an apparent positive shift in attitude toward PPB was evident in the comments made by the participants."

According to an evaluation survey, many participants said that the small group sessions were a most valuable part of the institute; in many cases they were considered to be more beneficial than the large presentations.

The Institute resulted in the accumulation of numerous PPBS curriculum materials, which are listed in a bibliography included in the appendices of the report.

Topic Two: PROGRAM PLANNING

See Bibliography for Information on availability of complete studies

Vo-Tec Education in 1970s

Vocational-Technical Education in the 1970's. Final Report. National Planning Association, Washington, D.C. 1970.

The Vocational Education Amendments of 1968 encourage administrators of vocational education programs to link the needs and interests of the student to reasonable expectations of future manpower demand. The current State Planning Guide for federal funding applications provides a format for reporting manpower demand by particular occupations and for describing the population served within political subdivisions of the state. A problem for the educator is the lack of a frame of reference in the form of a clear map of the larger picture of future manpower demand. Some help will soon be available in the form of a study just completed for the U. S. Office of Education by the National Planning Association.

This study analyzes the Nation's goals and the implications of pursuit of these goals for planning vocational-technical education programs. Just as a young married couple might decide priorities and the timing of family purchases or expenditures for a home, a car and medical care, so also does the Nation have options for either "more of the same" or enlarged purposes for objectives in education, health, urban development, or transportation.

In the N.P.A. study, manpower demand for 80 major occupations related to the pursuit of some of our national goals is translated into projected annual job openings in the next decade. Opportunities for workers are then compared with the number of 1967 completions from vocational-technical programs operating under federal funding. Worker demand increase in some occupations is in the 100-150 percent range, and implies marked expansion in relevant vocational-technical programs. New and developing occupations are reviewed and the potential growth of job opportunities for nonwhites is examined.

The final report of the National Planning Association, *Vocational-Technical Education in the 1970's,* together with six working papers dealing with occupations in health, education, social welfare, science and technology, construction, and transportation will be published by the Government Printing Office in early 1970.

Programs in Tech Education

National Program Development Institutes in Technical Education. Aaron J. Miller. The Center for Vocational and Technical Education, The Ohio State University, Columbus, Ohio. April 30, 1969.

Two-week National Institutes were held in the summer of 1968 at the University of Michigan, Ann Arbor, and at James Connally Technical Institute, Texas A&M University, Waco. The 89 participants included new state supervisors and assistant supervisors of technical education, junior-community college and technical institute senior administrators, deans and assistant deans, new and inexperienced technical education teacher educators, and local-level technical education supervisors where large administrative units are involved.

The need for such institutes was demonstrated by the lack of qualified personnel for assuming positions of administrative leadership in technical education at all levels of government. The Institutes provided participants with basic theoretical and philosophical concepts related to program development and operation.

The objectives set for the Institutes were:

- To provide a vehicle for development and improvement of a philosophy of technical education.
- To acquaint participants with resources for developing programs and methods for their use.
- To provide inservice training for personnel who are relatively experienced in the field of technical education leadership, so as to enable them to better understand the method of planned development of leadership personnel.
- To provide an exemplary institute program as a model for institutes within the states.

Trips Stimulate Discussion

The Institutes included activities such as lectures or formal presentations by resource persons, group discussions, individual preparation and participation in special interest group activities, and library study. In addition, each Institute scheduled a field trip to a nearby technical education institution or industrial laboratory. The purpose of the field trip was to stimulate discussion of institute participants. Instructional materials distributed to each participant included

monographs, research reports, reprints, government publications, illustrations, and other appropriate reference materials.

Topics covered by the program included "The Rationale and Need for Technical Education," "Administrative Structures for Technical Education Institutions," "Staffing Technical Education Programs," "Facilities and Equipment for Technical Education Programming," and "National, State and Local Resources for Program Support."

Evaluation instruments were designed to measure achievement in knowledge gained from the Institutes, plans to utilize this knowledge, and satisfaction with the content and methods of the Institutes. These instruments included a participant's self-appraisal questionnaire, which was administered both before and after participation.

Evaluation of the various presentations was also made. Steps were taken to measure the participants' professional objectives, and information will be used in follow-up activities to determine participants' progress toward their professional goals. The application form which prospective participants had filled out prior to being accepted for the Institutes also provided useful information in evaluating the overall success of the Institutes.

Post-Institute Evaluation

The post-institute evaluation included identification of program innovations and curriculum development projects which might have grown out of institute participation. Plans for future follow-up, including a study of the effectiveness of the Institutes in stimulating activities and interests in technical education, were made. Follow-up would also study "ripple effect" of the Institutes, in which trainees from the Institutes would begin programs in their states, and the effectiveness of The Center for Vocational and Technical Education in its role as consortium coordinator.

Other follow-up activities include surveys of trainees' personal development and host institutions' development which can be traced to Institute stimulation.

Conclusions which developed regarding the Institutes included the opinion that the geographical mix of participants was valuable in exchanging technical education information. It was also noted that the professional and institutional mixture of participants was valuable. The participants expressed general approval of the content and conduct of the Institute programs, and they evidenced some intent to implement positive program changes when they returned to their states. Evaluation also revealed the fact that the consortium approach (with The Center as coordinating agency) was very successful in planning, developing, implementing, and evaluating.

Recommendations for future institutes include that of making a study to determine methods for attracting participants from new and developing institutions. It was also recommended that the consortium approach be continued and that leadership and program development training be continued with assistance from Federal funds and national advisory services.

Experimental Community College for Rural and Urban Youth

A Feasibility and Planning Study for an Experimental, Two-Year Community College for Rural and Urban Youth. John Felty. State University College of Arts and Science, Plattsburgh, N.Y. May 1969.

Obtaining public reaction to the idea of establishing a residential two-year community college in an urban setting for both urban and rural youth was the object of this project. The philosophy behind the establishment of a college of this nature was that (a) large numbers of rural residents are migrating to the cities due to the lack of industrial and business work opportunities in rural areas, and (b) the lack of these opportunities is because industry and business are averse to settling in areas where there is a shortage of trained labor and an absence of social and cultural offerings.

Rural areas were found to have an abundance of land area suitable for construction of facilities for a residential college, but insufficient finances for doing so, and not enough college-age population to make it worthwhile. Cities, on the other hand, were found to have more college applicants than can be accommodated and enough funds to finance the construction of new institutions, but lack of land area adequate for the facilities required by a residential institution.

The study was made from June 1966 through September 1967. Surveys were conducted with students, local citizenry and community leaders, and covered five issues of concern: (a) social acceptability, (b) types of programs, (c) conditions of attendance, (d) financing, and (e) demographic, situational and historical variations among subgroups.

Questions which the study was planned to answer related to:

1. Identification of variations of groups in the area in order to be better able to interpret other information received.
2. Determination of minimum probable attendance at the institution and the amount of support available from the rural community.
3. Types of programs of interest to students.
4. Attitudes toward having an interracial school in a rural community.
5. Estimation of costs and possible sources of financing.

In response to questions regarding programs in which students would be interested (a choice was given of liberal arts courses, preprofessional transfer courses, or vocational-technical terminal courses), the largest percentage (40 percent) favored vocational-technical courses. Courses chosen by the students as ones which they would most like included in the vocational-technical curriculum of the proposed college included secretarial and nurses training for female respondents and business administration and technical skill courses for males. Approximately 60 percent of the adults interviewed in the rural area replied that they would be interested in adult education courses in either liberal arts or business-commercial fields.

It was concluded that a sizeable demand existed for the services offered by a community college, and that a large percentage of those who would attend would prefer vocation-

al-technical courses. It was recommended, however, that students who had the potential for completing a liberal arts transfer course be encouraged to enroll in one of these rather than in vocational-technical courses. It was also suggested that the first year of studies for all students include the maximum amount of general academic work possible.

An experimental program (one year preparatory) of enrolling high-risk students who lack preparation for higher education was proposed. Surveys had indicated that 50 percent or more of the New York high school students would need such assistance in order to do minimal college-level work.

As a result of the surveys, it was recommended that the college begin by offering liberal arts and business courses, and then, when feasible, expand into nursing, engineering and drafting. These same course offerings should be made available in evenings to area adults through coordination of regular staff and facilities.

A summary of the findings indicates that the experimental college idea is a workable one with many potential benefits both to the urban and rural students and to the area in which the college would be located. The high per-student cost which would be required by such an institution, however, could not be supported by the local community, and would necessitate funding from other sources.

Developmental outlines for establishment of a school are presented. It was suggested regardless of the data of this study, and its difference from that of other communities, that the experimental two-year community college idea would be workable in other areas where a rural setting could be offered for education of big-city youth.

Appendices to the study, which are presented in a separate volume, include data procured in the course of the study and samples of questionnaires and evaluative instruments.

Manpower Surveys for Vo-Tec Educational Planning

Conference on Manpower Surveys for Vocational-Technical Education Planning. David Pinsky. The University of Connecticut, Labor Education Center, Storrs, Conn. Jan. 31, 1969.

Eighty-six representatives of vocational education, employment services, labor departments and community colleges of 39 states attended this conference, July 8-12, 1968, at the University of Connecticut. The conference brought together personnel to develop an understanding of cooperative planning and techniques needed to conduct manpower surveys and how to use the findings.

Three manpower information lectures were presented on the first day of the conference.

Raymond F. Male, commissioner of Labor, State of New Jersey, prefaced his talk by noting that in British Columbia the departments of labor and education are combined under one commissioner—a result of the manpower needs of the twentieth century. Ending the separateness of these two functions, he said, requires thinking and communicating together as well as programing together. These tasks require the availability of manpower information in order to be worthwhile and reliable.

Byrl Shoemaker, director, Division of Vocational Education, State of Ohio, spoke of the need for manpower information which can be translated into training requirements for vocational education. He stressed the need for using broad occupational categories in manpower information and for identifying the geographical areas in which the majority of employment is available, so that training can be concentrated toward the most beneficial occupational and geographical areas.

Emanuel Weinstein, manpower development specialist, U.S. Office of Education, emphasized the imperative need for a continuous supply of accurate data for vocational and technical educators if present and future training and retraining needs are to be met. Development of new tools for gathering this information is one of the great needs of today.

One such tool which he mentions is *Vocational Education and Occupations,* the joint publication of USOE and the Manpower Administration (reviewed in this issue of RV). Mr. Weinstein sees this work as a means to "relate data on enrollments and completions to manpower trends and requirements. Using the data collected, it may become quite possible to adjust the 'output' of vocational education institutions as occupational needs vary."

Manpower Data Available for Vo-Ed

Successive lectures treated the "Availability of Manpower Data for Vocational-Technical Education." There were three lectures on national sources of availability for this data. David Lafayette, assistant director, Branch of Skilled Manpower and Industry Studies, U.S. Bureau of Labor Statistics, sees the Bureau becoming more involved in local manpower projections than before. An initial effort is the guidebook, *Tomorrow's Manpower Needs* (see September 1969 RV), which provides techniques for using national manpower projections to prepare state and local projections.

In discussing restraints existent in this attempt to develop projection techniques, the speaker noted both environmental and philosophical restraints. The reliability of occupational projections is without precision; however, the need for timely data is greater than that for exact data when projecting needs.

Vladimir Chavrid, research director, U.S. Employment Service, noted the lack of funds for development of information on manpower. He mentioned the development of a handbook for making State occupational manpower projections and for estimating the number of openings which will occur due to deaths and retirements. The need to balance demand and supply of trained people in each occupation was emphasized. In some areas, he noted, more people are being trained than estimates show will be needed.

Murray Weitzman, assistant chief, Population Division, U.S. Bureau of the Census, discussed "Plans for the Industry, Occupation, and Class of Worker Items in the 1970 Census of Population." Changes in questions for the 1970 census include the addition of two questions related to the original question, "What kind of work was he doing?" The census will now determine activities and duties connected with the job, and the job title. Categories will be expanded for purposes of worker classification; for example, the category of government will be split into Federal, State and local workers.

A new question will be asked regarding the completion of a vocational training program. Answers to this question, it is hoped, will assist officials in determining areas in which there is a market for vocational programs and the location of future training facilities. This question will also provide a basis for estimating the financial return from the investment in vocational training through investigation of the incomes of those who have (or have not) completed such programs.

State and Local Sources

Four lectures treated State and local sources for manpower data for vocational-technical education.

Alfred Horowitz, research and information director, Connecticut Labor Department, reflected vocational educators' attitudes that they do not have sufficient information on which to base reasonable decisions. He proposed an investigation of information which is existent and the ways in which it can be used. Two sources of data are (a) local labor sources (unemployment insurance studies and continuing wage and benefit history data), and (b) reworked national data, such as the census or *Tomorrow's Manpower Needs,* adapted to the local level.

David Pinsky, professor of labor education, University of Connecticut, cited studies of the Labor Education Center at the University regarding prospective manpower requirements. These studies investigated health manpower occupations, printing trades occupations, the Connecticut Valley tobacco industry, and new metalworking techniques as related to Connecticut manpower. The health manpower occupations study was outlined in detail to illustrate use of data for manpower projections.

G. W. Neubauer, director of program services, Florida Department of Education, questioned the process by which the prospective occupational trainee secures "demand" information of the labor market. Data are available from the Employment Services of the States; however, the facts as such are not in usable form and a lack of funds precludes translation into functional, easily interpreted information.

Dr. Neubauer described an Industry Services Unit now being developed in the State of Florida which will investigate the manpower climate in various areas of the State for the purpose of informing new industries of the most desirable locations for adequate manpower. Hopefully, this information will also be beneficial for planning vocational education programs.

Daniel Creamer of the National Industrial Conference Board indicated private research sources of manpower data for vocational-technical education. He noted that private research organizations are not engaged, in any substantial way, in generating manpower data for vocational-technical education. However, general manpower analysis and manpower projections which are being made in private industry, some of them by the National Industrial Conference Board itself, can be of use in planning vocational-technical education.

Utilization of Manpower Data

Four lectures were presented on Utilization and Effectiveness of Manpower Data.

Harold Duis, service program officer, U. S. Office of Education, agreed with other speakers in noting that more information is needed for program planning. Although noting that cooperation between agencies within States is improving, problems still exist which hinder the collection of the necessary data.

John Odgers, director of guidance and testing, Ohio Department of Education, enumerated five guidance responsibilities of the counselor in assisting counselees: (a) achieve a useful level of self-insight; (b) achieve a workable understanding of environmental opportunities and demands; (c) make the wisest possible educational and vocational choices and plans; (d) initiate action on the plans he has developed and (e) assume the responsibility for his own decisionmaking. These responsibilities demand use of up-to-date manpower information, and development of this information demands significant financial investment.

Richard W. Howes, assistant director, Division of Vocational Education, Connecticut Department of Education, discussed utilization of occupational studies with legislative bodies. These studies are used in projecting new and expanded building needs for presentation to the legislature. Facts regarding course or curriculum changes, operating budgets, equipment, and teacher needs are also obtained from these studies, or substantiated with facts from them. Graduate follow-up studies are also an important source of data, as percentages of vocational education course graduates who are placed in employment are good gauges of success of programs.

Carl A. Heinz, chief, Division of Occupational Analysis and Career Information, U.S. Employment Service, stressed the importance of full utilization of the *Dictionary of Occupational Titles.* He believes that knowledge of occupations gained through this volume can be extended to vocational education courses.

Coordination of Collection Efforts

Coordination among agencies in obtaining manpower data was discussed by four lecturers.

The coordination role of the State Department of Education was described by Herbert Righthand, chief, Bureau of Vocational Services, Connecticut State Department of Education. Recognizing that the department is "chiefly a consumer rather than a producer of data," Mr. Righthand indicated two aspects where coordination is necessary: coordination of agencies and coordination of data.

Francis Woods, manpower coordinator, Division of Manpower Development and Training, State of Connecticut, described the Cooperative Area Manpower System (CAMPS) and its role in coordination for obtaining manpower data. Although many problems beset the CAMPS program—among them lack of time, staff and interdepartmental communication—CAMPS is recognized as an attempt in the right direction and has a definite role to serve.

Edward B. Jakubauskas, professor of economics and director, Industrial Relations Center, Iowa State University, posed three questions to which the collection of manpower data and its utilization must address itself: (a) for what jobs do we train people, and in what ways do we establish priorities among competing shortage areas?; (b) how do we predict the capability of a worker for training and suitability for a particular occu-

pation?; and, (c) how can we match people and jobs most effectively?

Answers to these questions require better manpower data; obtaining better manpower data requires more effective coordination between the academic community and governmental agencies.

Harold Duis lectured on coordination at the federal level. Although he admitted that "coordination at the national level has not been highly effective," he mentioned that some efforts have met with some success. One of these efforts is the formation of a joint liaison committee between the Office of Education and the Bureau of Employment Security, which has been in operation since 1964. Other efforts are the CAMPS program and a joint committee which USOE has with the Department of Agriculture for cooperation in agriculture and home economics.

Data for Special Needs

There were three lectures on "Manpower Information To Meet Special Needs."

Herbert D. Brum, state supervisor, Disadvantaged Youth and Work Studies Program, Ohio Department of Education, presented information related to disadvantaged youth. There is a lack of information regarding disadvantaged youth, those with "special needs," and teacher personnel. Because the disadvantaged often feel that their first jobs are their lifetime careers, Mr. Brum believes that, "We, in developing our manpower information with regard to jobs and employment, perhaps, ought to give more attention to showing the interrelationship of various jobs and employment patterns, and how experience and skill in one particular area can lead to other areas."

Earl Klein, director, Human Resources Development Section, U.S. Employment Service, discussed many programs to educate and assist the disadvantaged to get jobs and keep them. He described a service of the Employment Service called the Human Resources Development Employability Model, which uses an individualized approach.

Howard Matthews, director, Manpower Development and Training Division, U.S. Office of Education, called for more educational programs of high quality, those with "adequate resources, well-trained teachers, suitable buildings, and appropriate curricula and educational methods." Cooperation between all levels of government, private employers, and trade and labor associations is needed.

At workshops, the participants discussed the adequacy of manpower information. They agreed that it was inadequate and offered ways to increase the utility of available data. They also felt that planners should keep abreast of changes in the occupational structure to enable trainees to be placed in jobs upon the completion of their training.

Recommendations made by conference participants were forwarded to the U.S. Office of Education and to other appropriate agencies. Among these recommendations are one which would establish better means of communication between State agencies for improved planning of vocational programs, and others which would aid in disseminating new information.

Balanced Programs in D.E.

Workshop on Planning, Implementing, and Evaluating Balanced Programs in Distributive Education. Gary R. Smith. Department of Business Education, Utah State University, Logan, Utah. May 1969.

Thirty-eight State and local distributive education supervisors from across the nation participated in this two-week workshop designed to allow participants to:

1. Develop an understanding and appreciation for systematic planning and programing techniques.
2. Develop an understanding of the social and economic problems facing vocational education.
3. Become acquainted with types of base line data needed to develop balanced programs.
4. Develop an understanding of the scope of the distributive education program including pre-high school services and interdisciplinary approaches to vocational education.
5. Develop a model for use in program development and evaluation.

Workshop participants developed a model for use in distributive education PPB, and they were encouraged to implement aspects of PPB in their states, in both distributive education and other areas of vocational education.

An introduction to PPB from several consultants who gave presentations covering the seven major areas of program planning, and opportunities to use this information by solving a problem centered around an imaginary state called "Transylvania," were offered the participants. A test given before and after the workshop provided the basis for evaluation regarding the amount of knowledge gained by participants during the workshop, and it also aided consultants in helping individual personnel.

The purpose of the workshop and a short introduction to PPBS were presented by Vernon Buehler, associate professor in business administration at Utah State University. Joseph McGivney, principal investigator, National Development Institute in Planning, Programming and Budgeting Systems, gave an overview and history of PPBS. Also discussed by John Stephens was the role of ERIC Clearinghouses in relation to vocational education.

Results of pretests and post-tests performed of workshop participants provided information for conclusions concerning achievement of the original objectives set for the workshop. It was determined that participants did develop a greater understanding of PPBS as a result of the workshop, and that an understanding of the social and economic problems facing vocational education was also developed. An acquaintance with base line data necessary for development of balanced DE programs was acquired, together with an understanding of the scope of distributive education. A model for use in program development and evaluation was developed by participants, with expectation that participants would be able to assist in implementing PPBS in their states and communities.

Recommendations reflected interest in follow-up conferences on utilization of PPB techniques and provision for dissemination of workshop information. A valuable bibliography and glossary are included.

DECEMBER ISSUE . . The subjects next month will be "Vocational Guidance and New Careers." See this issue for reports on studies dealing with this timely topic.

Effect of Area Vocational-Technical Schools in Minnesota

Vocational-Technical Education 1968: A Summary Report of a Study of the Effect of the Area Vocational-Technical Schools in the State of Minnesota. July 1968.

This study, begun Aug. 14, 1967, was conducted to determine present and projected employment requirements in Minnesota, and the relationship of various factors regarding vocational-technical schools to these requirements.

Factors such as the geographic distribution of area vocational-technical schools within the State, and the distribution of these schools in regard to population were investigated. How facilities of these schools are utilized, the present and projected enrollment of students and projected faculty requirements were considered. In addition, the study surveyed projected costs of adequate buildings, equipment and maintenance, and staff needs and qualifications. The study also attempted to determine the optimum size of the vocational-technical schools of the future.

Because of time and personnel limitations the study was limited to public post-secondary vocational-technical schools, with little attention given to high school vocational education or adult programs, even though the potential of these programs was recognized.

State Goals for Vo-Ed

The history of Minnesota's vocational-technical education program and the mission and goals of vocational education in the State are reviewed in the report. As presented in the report, these goals are:

1. Pre-employment education for high school and post-high students.
2. Supplementary education necessary for advancement.
3. Retraining for adults with obsolescent skills.
4. Updating occupational skills, or preparation for entry into a new occupation, for those re-entering the labor market.
5. Opportunities for individuals to pursue vocations suited to their potential capabilities while meeting the needs of trades, business, industry, and agriculture.

In surveying the role of the post-secondary vocational technical institution, the study underlines the fact that high school vocational programs today are no longer terminal for most American youths. The study asserts that high school programs should reflect this change by alterations in curriculum which would prepare students for post-secondary programs rather than preparing them exclusively in specific job skills. The statement—"Basic principles of applied science would be of more use than lathe operation to a student who would like to continue his education"—reflects the outlook which the report assumes.

Skills required by jobs in this day of rapid change are quickly outmoded. For this reason the study suggests that "post-secondary vocational and technical schools are going to have to adapt to continuing education programs in the technical fields." Education will become a continuing facet of a career in the near future.

A study of occupational information and employment needs demonstrates the sweeping changes which will occur in the labor force by 1975. The occupational group consisting of managers, officials and proprietors is expected to experience a sharp leap in numbers, a total of 29 percent between 1960 and 1975. The occupational group which will become the largest by 1975 is that of clerical and kindred workers, expected to grow 41.7 percent in the 15-year period. Salesworkers as well as craftsmen, foremen and kindred workers will also increase.

Automation will probably hit the semiskilled operatives group, although an increase of 15.3 percent in their numbers is expected. This group is expected to drop from first place in the number of persons employed in nonagricultural occupations, to third place. Service workers will increase greatly as the standard of living increases and people can afford to buy more services. Laborers will continue to decline due to mechanical innovations.

In outlining a comprehensive vocational program, the study notes that "effective educational management in the future will require the identification of the inputs, processes and outputs of the educational system." These data can be compiled into useful form through the use of data processing equipment which will store them for quick retrieval and investigation of the educational process to identify strengths and weaknesses.

Persons With Special Needs

Implementation of new services and training programs for persons with special needs is recommended in the report. Included among these services should be well-trained instructors, specially selected and sized groups, and motivation, personal development, placement and follow-up services. In addition, programs for those with special needs may have to employ one or more of the supportive services listed in the report:

- Remedial education for children deficient in basic learning skills.
- Encouragement of discouraged or under-motivated persons.
- Adult education.
- Prevocational orientation.
- Training in entry-level skills for persons whose basic educational skills are too limited to take advantage of advanced training.
- Subsidized on-the-job training.
- Training allowances or residential schools to permit persons to enter training programs while still having a means of subsistence.
- Work experiences for those who do not understand the discipline required by the work situation.
- Public service jobs for persons who cannot find employment in the job market.
- Other supportive services such as medical aid and child care.

One of the key elements in planning for the future of Minnesota's schools, according to the report, is a program of training and recruiting qualified teachers. New programs which give greater attention to the needs of the individual teacher's education include inservice education and special programs for teachers of special groups.

California Project To Prepare Educational Planners

Selected Publications of Operation PEP: A Statewide Project To Prepare Educational Planners for California.

"Network Based Management Procedures," written by Allen L. Buckner for Operation PEP. This monograph presents network-based management methods, techniques and procedures which can be used in educational planning, scheduling and controlling activities such as construction, curriculum planning, inservice training programs, and business operations. Management tools discussed include PERT (Planning Evaluation and Review Technique) and CPM (Critical Path Method). Emphasis is placed on "mission, function, task, and methods-means analyses."

The second chapter outlines the development of PERT/CPM network-based management methods, techniques and procedures. Advantages of using this approach are presented, along with a detailed explanation of the application of the approach. Discussion of appraising input requirements and of leveling and priority considerations is included.

Procedures for program control and considerations which must be made are the subject of the third chapter. Considerations, objectives, benefits, and implications of reports are presented. Use of a PERT/Cost technique for evaluation of program progress is delineated.

In the fourth chapter, other network-based management methods, techniques and procedures, including Line of Balance, Gantt Bar Charts, and Milestone Charts, and their implications for change are discussed. The fifth chapter seeks to establish relevant relations between network-based management methods, techniques and procedures and selected areas of system technology.

Appendices to the report include a glossary of terms associated with this technique, and a bibliography.

"Deriving and Specifying Performance Objectives for Education," by Donald R. Miller, director of Operation PEP. It is noted that "educational performance objectives must be made value sensitive and responsive to social change requirements." Social change requirements are determined through information from "social trends analyses," which seek to determine rates, degrees, directions, and types of change which are taking place. The requirements are set after an analysis is made of policy decisions, society's goals for education, needs of specific populations of the country, and the demands made for social services.

Four types of educational objectives which this report categorizes relate to policy, program, curriculum, and instruction. Problems associated with the derivation of performance objectives for education, including the complexity of social organization and conflicting values, philosophies, goals and policies, the organization of educational systems and educational agencies, the interdisciplinary nature of education as an evolving behavioral science, and communication, are discussed.

Specification of performance objectives through criteria established by Robert Mager in *Preparing Instructional Objectives* (Palo Alto, Calif.: Fearon Publishers, 1962), and the components of well-formed objectives are presented. According to Miller, these components are:

- The desired and valued outcomes, results, ends, outputs, and/or end states to be achieved.
- The requisite performance conditions (requirements and specifications) which must be managed, met, and/or maintained in performance.
- The criteria which can be used to measure achievement, change and other performance factors.
- Descriptions of the course and/or methods of action to be taken.
- Motivational rationales which legitimize and justify the course and/or method of action to be taken and the expected outcomes to be achieved in terms of both the organization's and the performer's purposes and relevant social change requirements and societal benefits.

"A Manager's Guide to Objectives," prepared for Operation PEP by Larry Harty and Bruce Monroe of Insgroup, Inc. This publication, in workbook form, provides a "map" for deriving and structuring meaningful educational objectives to fit the needs of individual organizations. Problems relating to management of the objective-setting process, putting objectives into writing and analyzing these objectives, along with refining, clarifying and using objectives are attacked in the guide. An annotated bibliography of additional topics related to objectives is included in the summary of the guide.

Topic Four: FEDERAL-STATE PLANNING

See Bibliography for Information on availability of complete studies

Vo-Ed and Occupations

Vocational Education and Occupations. U.S. Department of Health, Education, and Welfare, Office of Education and U.S. Department of Labor, Manpower Administration. Washington, D.C. July 1969.

Intended primarily as a tool for assisting State Boards of Vocational Education in completing certain sections of the State Plans, this document links vocational-technical education programs and occupations and provides a vehicle for evaluation, comparison and improvement of the results of occupational education. It contains realistic information regarding the relationship of occupational preparation programs and the occupations themselves, and it should be a useful tool for guidance counselors and teachers.

Part I lists and defines vocational-technical education instructional programs and their relation to titles and worker trait groups listed in the *Dictionary of Occupational Titles* (DOT).

The reverse approach is taken in Part II, where job titles from the *Dictionary* are related to correspond-

ing preparation programs. This part will assist counselors in determining instructional programs related to occupations which have been discussed and selected. In addition, it will make data for program planning more useful in that information on current and projected employment will be more specific and uniform.

The extent of manpower needs and the potential contribution of vocational education to the supply of manpower may be measured more accurately as a result of the coding system outlined in this document.

Program Planning & Evaluation

Selected Presentations from the National Conference on Program Planning and Evaluation. Washington, D.C. March 12-14, 1969.

In a presentation titled "Vocational Education: From a World of Stability to a World of Change," Grant Venn, associate commissioner for Adult, Vocational and Library Programs, U.S. Office of Education, outlined basic reasons for changes in planning and budgeting of vocational education and for developing a system acceptable both to future employers and to the total educational community.

He described seven areas of responsibility for vocational programs of the future: (a) occupational information programs for elementary and junior high school students and parents; (b) occupational orientation at the junior high school level; (c) cooperative work-experience programs for one-quarter of each school year; (d) offering instruction in occupational clusters as well as in specific job skills; (e) intensive training programs for youths who have not received any vocational training in high school and are suddenly faced with the necessity of earning a living; (f) adult retraining programs, and (g) job-placement programs in the high schools.

PPB from the point of view of the Department of Health, Education, and Welfare was treated by Alice Rivlin, assistant secretary for Planning and Evaluation, HEW. Experiences which the Department has had in the past two years in putting such a system into effect were discussed by this speaker.

Dale Chismore, Terminology Compatibility Branch, Division of Statistical Operations, National Center for Educational Statistics, discussed the third draft of Handbook VI, *Standard Terminology for Instruction in Local and State School Systems*. Dr. Chismore stated that a major purpose of the handbook is "to identify, classify and define items about curriculum and instruction useful to and needed by educators across the nation." He also discussed some of the specific needs which the handbook will fill.

William A. Medina, chief, Resources Coordination Division, Bureau of Training, U.S. Civil Service Commission, presented a paper on "Preparing Personnel for Planning, Programing and Budgeting." Mr. Medina discussed the development of training programs for PPB in the Federal government and some of the problems which were encountered in their development. He described the types of people who would benefit from such training programs and their instruction. Possibilities for having these training programs in each Department of the government and in State governments were presented.

John Beaumont, chief, Special Services, Division of Vocational and Technical Education, U.S. Office of Education, presented "Staffing the State Department To Meet the Needs of Vocational Education." Emphasizing that the changing role of State Divisions of Vocational and Technical Education requires major reorganizations of state staffs, he reviewed some of the roles which the staff will be called upon to fill.

Emmanuel Weinstein, occupational analyst, Division of Vocational and Technical Education, U.S. Office of Education, discussed the background and development of a taxonomy of occupational titles and instructional programs. Uses of the *Standard Industrial Classification Manual* and the *Dictionary of Occupational Titles* were presented.

Other presentations included "Educating the People Who Make the Decisions for Effectiveness in Meeting the Purposes of Vocational Education," by Rupert Evans, dean, College of Education, University of Illinois; "Applications of Program Budgeting to Local School Systems; With Implications for Program Planning, Budgeting and Evaluation at Local and State Levels," by Thomas G. Fox, Brookings Economic Policy Fellow with HEW; "Cost/Benefit—Cost/Effectiveness Studies," by Jacob Kaufman, director, Institute for Research on Human Resources, The Pennsylvania State University; and, "Local School Planning and Budgeting by Activity," by Allen R. Lichtenburger, chief, Terminology Compatibility Branch, Division of Statistical Operations, National Center for Statistics.

State Plan Development

Papers Presented at the National Conference on Methods and Strategies for State Plan Development in Accordance With the Provisions of the Vocational Education Amendments of 1968. Covington, Ky. March 24-27, 1969.

This conference, attended by 221 participants from all levels of government and from educational associations, was arranged for the purpose of interpreting the Vocational Education Amendments of 1968, and particularly the Rules and Regulations prepared by the U.S. Office of Education for the development of State Plans. The USOE *State Plan Guide* for the development of a State plan was also presented, discussed and clarified, as were several working papers pertaining to the design of State Plans. Five key problem areas were selected by the conference planners for working papers.

Walter Arnold, former director, Division of Vocational and Technical Education, U.S. Office of Education, presented a working paper, "Planning at the State Level—Long-Range and Annual." He listed the important specific requirements for planning in the Act and made comments on each of these. Factors that need to be identified before development of a program plan, and a systems approach to planning were discussed. The ultimate goal which Dr. Arnold foresees in use of the systems approach is the best use of funds in light of the needs of both the people and the employers of a State.

Cleveland L. Dennard, president, Washington Technical Institute, Washington, D.C., presented a paper titled "A Systems Approach to Vocational Technical Education Planning at the Local Level." Noting that

"new methods and strategies must now be at the disposal of local vo-ed decisionmakers for relevant community responsiveness," Dr. Dennard described the Washington Technical Institute systems approach and how it might be applied on the local level.

William G. Loomis, assistant superintendent for Community Colleges and Vocational Education, State Department of Education, Salem, Ore., presented a working paper on "The Role of Professional Vocational Education Personnel in State Program Planning and Evaluation." His approach to planning for change included a view of the strengths and weaknesses of state departments in relation to the job ahead and the place of vocational education in relation to the priorities of the total state educational plan. Plans for organizing for action and their application were submitted.

Rupert Evans, dean, College of Education, and professor of Vocational and Technical Education, University of Illinois, discussed "The Role of the State Advisory Council and Its Relation to the State Board for Vocational Education." After outlining the membership and duties of the advisory council, Dr. Evans presented procedures for planning and evaluation, and suggested that state advisory councils on vocational education may serve as models for other commissions which are appointed by governors.

Harold Starr, project director of State Program Evaluation, The Center for Vocational and Technical Education, The Ohio State University, Columbus, discussed "Methodologies for Conducting State Program Evaluation." In describing several evaluation methodologies, Dr. Starr suggested that a product-oriented methodology within the framework of a systems approach is the most valuable alternative. Major steps in organizing such a system were outlined.

The Conference was climaxed by a session in which the participants from the U.S. Office of Education related all topics that had been discussed to the subject of "Implementation of State Plan, Evaluation and Reports."

plain talk

George L. Brandon, Editor, Research Visibility

THE PERSISTENT THEME of comprehensive planning, the "tomorrow let's get organized" idea, has a strong, valid appeal to all educational planners. Basically, the struggle for good organization, effectiveness and efficiency is a solid American tenet of our society and its Government on all levels.

Generally the hallmark of educational professionals from classroom teacher to chief executive has traditionally been the degree to which he or she is organized and competent to surmount a system of inputs and products. Unfortunately as institutions become systems, we sometimes witness a preponderance of attention on *input,* and the educational products are either forgotten in the intriguing process, left to the expertise of the evaluators or, worse yet, assumed to be of the same mold and substance.

The parallel to the American assembly line is striking—and disastrous. With full consideration of all of the merits of comprehensive educational planning, and there are many, have we had an overly soft-sell of the systems approach and the model technique? At least one educational writer has us in an era of model mania:

> The idea of building a model that will produce predictable common results is a persuasive doctrine. It takes its roots, no doubt, from the ancient notions about molding minds, characters and civic behaviors. More recent support is found in the world of technology where molds can produce uniform products. In recent years impetus for such movements in education has come as well from the practice of model implantation by certain philanthropical foundations and government agencies.
>
> A gullible public lends encouragement by being willing to buy whatever new models are developed—even without proof that they will produce claimed results. When one model fails, the tactic is to turn to another. Deficient formulas and their advocates tend to be discredited but the model approach itself seems not to be questioned.
>
> In reality, a model tends to negate attention to individual differences. Its existence assumes that all learners will be fitted to the mold or vice versa. Those whose characteristics are too extreme for the model to be applicable simply get left out. Those who most nearly fit receive little individual attention either since dependence is placed on the power of the pattern. (Lindley J. Stiles in "Model Mania." Policy and Perspective. *Journal of Educational Research,* July-August, 1969. Madison, Wis.)

The model trap should be much more than a fleeting concern as the vocational education community accepts the new challenge of legislation and resources "so that persons of all ages in all communities of the State . . . will have ready access to vocational education." By all means, let's get organized—for individuals and individual differences!

And then there's comprehensive planning for the research program. *The Research Handbook for Vocational-Technical Education* has numerous guidelines for the shape of tomorrow's research effort. Researchers Hull, Frazier and Stevenson of the Oklahoma Research Coordinating Unit have assembled four sets of guiding principles in the publication, which is one of the first handbooks to come out of last winter's national conferences on vocational and technical education. The principles are backed up with a rich appendix of materials, procedures and examples, valuable adjuncts to any research program which is getting underway, or for that matter, any program which may have been underway for some time.

The *Handbook* (which includes a *model* for educational change) assumes a *functional* role for research—a function of program planning and development. Its 48 pages discuss research in vocational and technical education around a framework of (a) a legislative mandate, (b) State and local administration of research funds, (c) coordination and dissemi-

nation of findings, and (d) implications for national research and development.

Limited copies of the *Handbook* are obtainable from Michael Russo, Division of Vocational and Technical Education, U.S. Office of Education, Washington, D.C., 20202.

Good back-up for educational planning, "ERIC and Its Services." If you are already familiar with ERIC and its rich resources, there's a good, self-administered "test" to determine your ERIC IQ. The June, 1969, *Centergram* (Vol. 4, No. 6) of The Center for Vocational and Technical Education at The Ohio State University devotes its entirety to an explanation of ERIC and its services. More so, the description is integrated with The Center's function as the official *Clearinghouse* of vocational and technical education.

Brevity and completeness best describe the *Centergram's* treatment of the ERIC system; all vocational personnel should have this description or ready access to it. A directory of research coordinating units is also included. Highly recommended for careful review of research and professional literature in these times when the avalanche of printed materials defies staying abreast of anything other than titles and abstracts. Write to The Center, 1900 Kenny Rd., Columbus, Ohio, 43210.

A PPBES model and an anticipated report of progress. A local model of program planning-budgeting-evaluation of some dimensions should develop from the USOE-sponsored study with the Research Corporation of the Association of School Business Officials. The goal of the project is to improve management of educational and financial resources by determining the quality and cost of the products of education. Expected outcomes are (a) development and dissemination of a conceptual model, (b) demonstration of an operational system in the Dade County, Florida, school system, and (c) encouragement of other local school systems to investigate and use the model.

Basic design of the model was revealed at a Denver conference, where 180 persons participated. The model employs ERMD (Educational Resource Management Design), the details of which should have appeared in an August report. Local and State personnel should anticipate the announcement of eight regional and two professional conferences planned for this Fall.

Information on the project, of which William H. Curtis is director, should be forthcoming in *The School Administrator,* newsletter of the American Association of School Administrators, 2011 16th St., N.W., Washington, D.C., 20036.

"If we gave credit to students on the basis of what they already know or learn on their own, many of them could save at least a year of college work. The economic gains would be enormous." *Possibly other gains, fully as important, would accrue to their individual sense of achievement and satisfaction—at most levels of instruction and work.* (Quotation by Edgar Dale in *Teaching and Learning,* The Newsletter of The Ohio State University's College of Education; piggyback italics by the *RV* editor.)

bibliography

STUDIES REPORTED IN THIS ISSUE

Topic One: The Systems Approach

"Vocational-Technical and Continuing Education in Pennsylvania: A Systems Approach to State-Local Program Planning." Walter M. Arnold. Pennsylvania Department of Public Instruction. 1969. 493 pages. (Single copies available upon request, on a first-come, first-served basis. Write to Dr. Jay Smink, Director, Research Coordinating Unit, Box 911, Harrisburg, Pa. 17126.)

"The Oregon Planning-Programming-Budgeting-Systems Institute." Harold V. McAbee. Teaching Research Division, Oregon State System of Higher Education, Monmouth, Ore. Dec. 31, 1968. 112 pages. (See future issue of RIE for ordering information.)

Topic Two: Program Planning

"Vocational-Technical Education in the 1970s: Final Report." National Planning Association, Washington, D.C. 1970. (To be available from the Government Printing Office in early 1970.)

"National Program Development Institutes in Technical Education." Aaron J. Miller. The Center for Vocational and Technical Education, The Ohio State University, Columbus, Ohio. April 30, 1969. 77 pages. (See future issue of RIE for ordering information.)

"A Feasibility and Planning Study for an Experimental, Two-Year Community College for Rural and Urban Youth." John Felty. State University College of Arts and Science, Plattsburgh, N.Y. May 1969. 474 pages. (See future issue of RIE for ordering information. Summary copies of report (80 pages) available from Office of Institutional Research, State University College of Arts and Science, Plattsburgh, N.Y. 12901. Price $1.00.)

"Conference on Manpower Surveys for Vocational-Technical Education Planning." David Pinsky. The University of Connecticut, Labor Education Center, Storrs, Conn. Jan. 31, 1969. 162 pages. (Limited number of copies available from Labor Education Center, The University of Connecticut, Storrs, Conn. 06268.)

"Workshop on Planning, Implementing, and Evaluating Balanced Programs in Distributive Education." Gary R. Smith, Department of Business Education, Utah State University, Logan, Utah 84321. May 1969. 181 pages. (See future issue of RIE for ordering information.)

Topic Three: Statewide Planning

"Vocational-Technical Education 1968. A Summary Report of a Study of the Effect of the Area Vocational-Technical Schools in the State of Minnesota." Minnesota Research Coordinating Unit in Occupational Education, Minneapolis, Minn. July 1968. 74 pages. (ERIC # ED 025 648. HC: $3.80, MF: 50¢.)

Selected Publications of Operation PEP: A Statewide Project To Prepare Educational Planners for California. Burlingame, Calif. (See future issue of RIE for ordering information.)

Topic Four: Federal-State Planning

"Vocational Education and Occupations." U.S. Department of Health, Education, and Welfare, Office of Education and U.S. Department of Labor, Manpower Administration. July 1969. 292 pages. (Available from Government Printing Office. Price: $2.25.)

"Selected Presentations from the National Conference on Program Planning and Evaluation." Washington, D.C. March 12-14, 1969. 80 pages. (ERIC # ED 028 297. HC: $4.10, MF: 50¢.)

"Papers Presented at the National Conference on Methods and Strategies for State Plan Development in Accordance

with the Provisions of the Vocational Education Amendments of 1968." Covington, Ky. March 24-27, 1969. (Copies of the guidebook resulting from this conference will be available upon request from Michael Russo, U.S. Office of Education, 7th & D Sts., S.W., Washington, D.C. 20201.)

ADDITIONAL STUDIES

Topic One: The Systems Approach

"Educational Planning-Programming-Budgeting: A Systems Approach." Harry J. Hartley. New York University. 1968. 290 pages. Price: $7.95. Prentice-Hall, Inc., Englewood Cliffs, N.J. 07632.

"Occupational Data Requirements for Education Planning." Georgianna B. March. University of Wisconsin, Madison, Wis. 1966. 165 pages. (ERIC # ED 003 491. HC: $7.20, MF: 27¢.)

"Occupational Education: Planning and Programming. Vol. One." Edited by Arnold Kotz. Stanford Research Institute, Menlo Park, Calif. September 1967. 221 pages. (ERIC # ED 017 733. HC: $8.92, MF: $1.00. Volume Two: ED 017 734. HC: $11.24, MF: $1.25, 279 pages. Also available for $6.00 (each volume) from Stanford Research Institute, Rosslyn Plaza, 1611 N. Kent St., Arlington, Va. 22209.)

"PPBS—New Tool for Education." J. A. Perkins, et al. *Ohio School Boards Journal.* Vol. 13, No. 7. July 1969. Page 9. (This magazine is available for $6.00 per year from Ohio School Boards Association, Editorial and Advertising Offices, 3752 N. High St., Columbus, Ohio 43214.)

Topic Two: Program Planning

"Review and Synthesis of Research on the Economics of Vocational Education." J. Robert Warmbrod. The Center for Vocational and Technical Education, The Ohio State University. November 1968. 62 pages. (ERIC # ED 023 937. HC: $3.20, MF: 50¢.)

"Program Evaluation and Review Technique: Applications in Education." Desmond L. Cook. The Ohio State University, School of Education. 1966. 100 pages. (Available from Government Printing Office. Price: 45¢.)

"A Cost-Effectiveness Study of Vocational Education: A Comparison of Vocational and Non-vocational Education in Secondary Schools." Ernest W. Stromsdorfer, et. al. Pennsylvania State University Institute for Research on Human Resources, University Park, Pa. March 1969. 302 pages. (Available from Institute for Research on Human Resources, The Pennsylvania State University, Boucke Building, University Park, Pa. 16802. Price: $5.00.)

"Vocational-Technical Training and Technological Change." Richard H. P. Kraft, *Educational Technology,* Vol. IX, No. 7. July 1969. p. 12-18. (This magazine available by subscription only.)

"Vocational Education and Technical Training: Condensed Task Report, Part I." Marshall Metze, et al. Battelle Memorial Institute, Columbus, Ohio. November 1968. 42 pages. (Available from Ohio Department of Education, Division of Research, Planning and Development, 71 E. State St., Columbus, Ohio 43215. Also available through ERIC: # ED 028 279. HC: $2.20, MF: 25¢.)

"Implementation—New Designs for the Challenge of the 1970s (Trade and Industrial Education)." American Vocational Association, Washington, D.C. 1968. 39 pages. (ERIC # ED 028 282. HC: $2.05, MF: 25¢. Also available from American Vocational Association, 1510 H St., N.W. Washington, D.C. 20005. Price: 75¢.)

"The Relative Effect of Selected Practices and Media Upon Student Enrollment in Industrial-Technical and Engineering Technician Programs at the Junior College Level." Robert V. Krejcie. 1968. 132 pages. (Available from University Microfilms, Inc., 3000 N. Zeeb Rd, Ann Arbor, Mich. 48106.)

Topic Three: Statewide Planning

"Guidelines for Multiple-Teacher Departments of Vocational Agriculture." Donald E. Elson, Kansas State Board for Vocational Education. Topeka, Kan. January 1969. 17 pages. (ERIC # ED 028 287. HC: 95¢, MF: 25¢.)

"Organization and Operation of a Local Program of Vocational Education." New York State University, Buffalo. 1968. 96 pages. (Available from Ohio Trade and Industrial Education Service, Instructional Materials Laboratory, The Ohio State University, 1885 Neil Ave., Columbus, Ohio 43210. Price: $1.00. Also available through ERIC: # ED 022 061. HC: $3.92, MF: 50¢.)

"Projected Program Activities for 1968-69: Directions for the Future." Texas Education Agency, Austin, Texas. 1968. 92 pages. (ERIC # ED 028 261. HC: $4.70, MF: 50¢.)

"Guidelines for the Development of Vocational Education in Texas Through 1975-76." Texas Education Agency, Austin, Texas. 1968. 49 pages. (ERIC # ED 028 271. HC: $2.55, MF: 25¢.)

Topic Four: Federal-State Planning

"National Seminar on Program Planning, Budgeting and Evaluation Vocational-Technical Education: Final Report." Clodus R. Smith and John Connolly. University of Maryland, College Park, Md. June 19-30, 1967. 53 pages. (ERIC # ED 018 645. HC: $2.64, MF: 50¢.)

DOCUMENT SOURCES

The material reported on in *Research Visibility* may be obtained from several sources. The source of each publication is indicated in each entry. The key to the abbreviations used there and instructions for obtaining the publications are given below:

CFSTI—Clearinghouse for Federal Scientific and Technical Information, Springfield, Virginia 22151. Copies of reports with this symbol may be purchased for $3 each (paper) or 65 cents (microfiche). Send remittance with order directly to the Clearinghouse and specify the accession number (AD or PB plus a 6-digit number) given in the listing.

ERIC—Educational Resources Information Center, EDRS, c/o NCR Co., 4936 Fairmont Ave., Bethesda, Maryland 20014. Copies are priced according to the number of pages. The MF price in the listing is for microfiche; the HC price is for paper copies. Send remittance with order directly to ERIC-EDRS and specify the accession number (ED plus a 6-digit number) given in the listing. *How to Use ERIC,* a recent brochure prepared by the Office of Education, is available from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402; the catalog number is FA 5.212: 12037-A; price: 30 cents.

GPO—Government Printing Office. Send orders directly to Superintendent of Documents, U.S. Government Printing Office, Washington, D. C. 20402, with remittance for specified amount.

MA—Manpower Administration. Single copies free upon request to U.S. Department of Labor, Manpower Administration, Associate Manpower Administrator, Washington, D. C. 20210.

OTHER SOURCES—Where indicated the publication may be obtained directly from the publisher at the listed price.

Research Visibility is a research project of the American Vocational Association. The purpose is to give visibility to significant research: experimental, demonstration and pilot programs; upgrading institutes, seminars and workshops; and other leadership development activities for teachers, supervisors and administrators. The *Research Visibility* report synthesizes important projects which have been reviewed, selected and analyzed for their value to vocational, technical and practical arts educators, guidance personnel, and other leaders in education, manpower and related fields. A composite bibliography of significant research and development materials is included.

The project is cooperatively financed by the American Vocational Association and a Vocational Education Act of 1963 grant (OEG 2-7-070633, project 7-0633; "Synthesis and Application of Research Findings in Vocational Education").

George L. Brandon, professor in residence (Pennsylvania State University) is editor of *Research Visibility*. He is assisted in the preparation of these reports by Research Assistant Marsha Golden of the AVA headquarters staff.

As *Research Visibility* is prepared under a U. S. Office of Education grant, it is not included in the American Vocational Journal copyright.